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EMERGENCY RESPONSE PLAN

FOR UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGIONS 6 AND 7

DEPARTMENT OF HOMELAND SECURITY SCENARIO 10 – MAJOR HURRICANE IN A PORT CITY

March 2008

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Figure 1: Houston, Texas Hurricane Planning Map-Storm Surge

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Appendix A: National Resource Template for DHS Scenario 10 Appendix B: Equipment Discussion for DHS Scenario 10

1. PURPOSE

This Hurricane Response Plan was prepared as part of the United States Environmental Protection Agency's (U.S. EPA) effort to respond to five simultaneous events across the United States. The activities outlined in this plan assume that the State has requested assistance from the Federal Emergency Management Agency (FEMA), and FEMA provided tasking and funding for EPA actions. This Hurricane Response Plan incorporates the resources of U.S. EPA Regions 6 and 7, in response to the Department of Homeland Security (DHS) *National Planning Scenario* 10: Natural Disaster – Major Hurricane. This Response Plan assists in the preparedness efforts by identifying potential resource needs, a possible organizational structure, expected response activities and areas for additional development. While this plan provides the benefits described above, specifics of an actual event could alter various aspects of the response plan.

2. EXECUTIVE SUMMARY

A Category 5 hurricane hits the Major Metropolitan Area (MMA). Sustained winds of 160 mph and a storm surge of greater than 20 feet above normal cause major damage to an area at least 100 miles in diameter. Extensive flooding from rainfall prior to the hurricane, rainstorms associated with the storm, and the storm surge cause major flooding throughout MMA.

In the aftermath of the storm, massive amounts of vegetative and structural debris generated by the storm and associated tornadoes; impede travel within and around the city. Throughout the MMA, the disruption of infrastructure, specifically potable water, sewage, electricity, and communications persists for a minimum of 10 days after hurricane landfall.

Casualties	1,000 fatalities; 5,000 hospitalizations
Infrastructure Damage	Buildings destroyed, large amounts of debris
Evacuations/Displaced Persons	1 million evacuated 150,000 seek shelter in safe areas 200,000 homes damaged
Contamination	From hazardous materials, in some areas
Economic Impact	Billions of dollars
Potential for Multiple Events	Yes, seasonal
Recovery Timeline	Months to years

The widespread environmental impacts from a category 5 hurricane will impact industry and the general public. These environmental impacts include destruction of critical infrastructure, releases of hazardous material to the environment, and the generation of large amounts of debris. Damage to infrastructure of the MMA will complicate response actions by EPA.

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The magnitude of destruction to the MMA will require long-term deployment of resources to complete response activities. This response plan divides response activities into three phases: Pre-Deployment, Initial Response, and Peak Response. During the Peak Response Phase, the planned response organization involves an Area Command with four Incident Command Posts that are each responsible for three counties. The amount of EPA resources during the Peak Response is over 260 EPA and 1680 EPA contractors for one rotation. Long-term deployment of resources will require multiple rotations of personnel which increases this resource demand.

Due to the conditions following a hurricane, the Logistics Section in the command structure will be vital in supplying sufficient food and shelter for the volume of EPA responders required to complete EPA FEMA MAs.

3. SCENARIO DESCRIPTION

A Category 5 hurricane hits the MMA. Sustained winds are at 160 mph with a storm surge greater than 20 feet above normal. Hurricane force winds cover an area of 100-miles in diameter and gale-force winds cover an area of 400-miles in diameter. As the storm moves closer to land with a forward speed of 15 mph, massive evacuations are required. Certain low-lying escape routes are inundated by water anywhere from 5 hours before the eye of the hurricane reaches land. Over the last 4 months, 25 inches of rainfall has increased the risk of flooding due to ground saturation and rivers at above normal conditions.

Hurricanes are intense tropical weather systems consisting of dangerous winds and torrential rains. Hurricanes often spawn tornadoes and can produce a storm surge of ocean water that can be up to 24 feet at its peak and 50 to 100 miles wide. The most destructive companion of hurricanes is the storm surge.

A hurricane is categorized by its sustained wind intensity on a Saffir-Simpson Hurricane Scale that is used to estimate the potential for property damage and flooding. "Major" hurricanes are placed in Categories 3, 4, or 5 with sustained wind intensities between 111 mph to greater than 155 mph. The most dangerous potential storm would be a slow moving Category 5 hurricane, making landfall in a highly populated area.

3.1 GEOGRAPHICAL CONSIDERATIONS/DESCRIPTION

Specific geographical considerations of a hurricane hitting the Galveston-Houston, Texas area in Region 6 are discussed in this section. Approximately 5.5 million people inhabit the 11 Counties anticipated to be impacted by this storm. The counties expected to be impacted are: Galveston, Chambers, Harris, Jefferson, Liberty, Orange, Hardin, Brazoria, Matagorda, Fort Bend, and Wharton (Figure 1).

Houston is the fourth largest city in the United States. It is home of the Texas Medial Center-the world's largest concentration of healthcare and research institutions-and NASA's Johnson Space Center, where the Mission Control Center is located. Houston's economy has a broad industrial base in the energy, manufacturing, aeronautics, and technology; and the area is a leading center

for building oilfield equipment. The Port of Houston is the second busiest port in the United States and the tenth busiest port in the world.

There are 13 oil refineries located within the area to be impacted, if the storm makes a direct hit on the Galveston-Houston Area. These refineries are located in Galveston, Harris, Jefferson, and Brazoria Counties. These refineries make up approximately 20% of the daily operating capacity of the United States.

Most of Houston and the surrounding area is located in the gulf coastal plain, consisting of forested land, marshes, swamp or prairie. The gulf coastal plain extends inland Flatness of the local terrain, when combined with urban sprawl, has made flooding a recurring problem for the city. Downtown lies approximately 50 feet above sea level.

EPA Region 6 has a regional lab located in Houston as well as inspectors and personnel to support lab activities. Region 6 would typically utilize the Houston Lab for sample analyses during an event of this nature. Since the Region 6 lab will likely be impacted in a Galveston/Houston landfall, it is unlikely that these personnel and equipment will be available to assist in the short term. The Region 7 laboratory is located in Kansas City and will be utilized if the Region 6 lab is unavailable or that additional Regional laboratory support is necessary.

3.2 ASSUMPTIONS

- The majority of local fire, police, and other response personnel and officials are victims of the storm and unable to coordinate immediate response resources.
- The port facility is closed completely for one month and requires months of work to restore operations. Major airports in the MMA are closed for approximately 10 days.
- The MMA area is completely without electric power, potable water, and sanitation/sewer services for the first 10 days following the disaster.
- Food, medicine, gasoline, and other necessities that depend on ground transportation and other infrastructures are also not readily available for the first 10 days following the disaster.
- Communications systems-including telephones, radios, and cellular systems-are only at 90% capacity in the first week following the storm.
- Destruction of the petrochemical refineries and office buildings, Texas Medical Center, and Johnson Space Center will cause severe repercussions for the State and region.

4. ENVIRONMENTAL IMPACT FROM THE HURRICANE

The widespread environmental impacts from a category 5 hurricane will impact industry and the general public. Potential environmental impacts include:

- Severe damage to factories, chemical plants, and underground storage tanks causing the release of hazardous materials.
- Displacement of vessels containing oil and hazardous waste will release their contents into navigable waters.
- The hurricane will displace or "orphan" containers of various sizes containing hazardous materials. These orphaned containers will be deposited when floodwaters recede.
- Wind, flooding, and power outages will damage critical infrastructure such as wastewater treatment plants and drinking water systems.
- Large volumes of debris will be generated from the flooding and wind damage of structures.

5. CONCEPT OF OPERATIONS

5.1 RESPONSE TIMELINE

The response activities conducted by EPA will be divided into three phases: Pre-Deployment, Initial Response Phase, and Peak Response Phase. Although response activities will be divided into three phases, activities will transition into the next phase without interruption.

The Pre-deployment phase will begin five days prior to landfall and will continue until 48-72 hours after landfall, or until resources (equipment and personnel) are mobilized. Pre-deployment activities will include monitoring the projected storm path, preparation of resources, and coordination with EPA response partners prior to hurricane landfall. Immediately after landfall, pre-positioned EPA resources will initiate environmental Rapid Needs Assessments in coordination with FEMA and State representatives.

The Initial Response Phase follows the Pre-deployment phase and lasts approximately 10 days. This phase includes the deployment of sufficient personnel and equipment within 48 to 72 hours after landfall to conduct immediate emergency operations and to prepare for the increase in resources necessary to transition into the Peak Response Phase. The volume of resources mobilized for the Peak Response Phase is dependant on FEMA MAs assigned to EPA.

The Peak Response Phase will begin approximately ten days after mobilization of the Initial Response Team and will continue until the FEMA MAs tasked to EPA are completed. This phase includes the mobilization of resources to support a long-term response involving multiple assignments. Resources assigned to the Peak Response Phase will demobilize once FEMA MAs are completed and authority is transitioned to the State and local agencies.

5.2 PRE-DEPLOYMENT

Due to weather forecasting, a major hurricane will be a noticed event. Therefore, EPA will be able to organize response resources prior to landfall.

Incident Objectives for the Pre-Deployment Phase include:

- Ensure health and safety of responders and the public by conducting operations in accordance with approved site safety plan.
- Coordinate with Federal, State, Tribal, and local representatives.
- Post-landfall, pre-positioned EPA resources will initiate environmental Rapid Needs Assessments (RNA) with FEMA and State representatives.
- Staff FEMA Emergency Response Team Advanced (ERT-A) and Rapid Needs Assessment (RNA) Team as needed by FEMA.
- Maintain open coordination/communication with Regional management.

5.2.1 Activities

Prior to hurricane landfall and the first days following landfall, EPA will be conducting the following activities:

- Coordination with Federal, State, Tribal, and local officials.
- Staffing the FEMA Regional Response Coordination Center, FEMA Emergency Response Team, FEMA Rapid Needs Assessment Team and EPA Region 6 Emergency Operations Center (REOC).
- Coordination between EPA Regions 6 and 7.
- Notify Response Support Core (RSC) for possible activation.
- Notify the Regional Incident Management Team of possible activation.
- Establish the Initial Response Team.
- Collect important environmental information such as facility and contact information for the potentially impacted area.
- Conducting a Rapid Needs Assessment with FEMA after landfall.

5.2.2 Organization

Deployment of responders will be limited during the Pre-Deployment Phase. Responders that are deployed during this phase will staff the FEMA Regional Response Coordination Center, FEMA Emergency Response Team, FEMA Rapid Needs Assessment Team and EPA Region 6 (REOC). ICS Form 207-Organizational Chart for REOC is located in Section 9.3.1. If more than one responder is mobilized, the representative serving on the FEMA Emergency Response Team serve as the EPA Incident Commander.

5.2.3 Resources

An estimated one to four EPA On-Scene Coordinators (OSCs) will be mobilized during the Predeployment Phase to conduct field activities. Additional personnel will mobilize to support the FEMA RRCC and the EPA Regional Emergency Operations Center (REOC). The Personnel Summary Table for the REOC located in Section 9.3.2.

5.3 INITIAL RESPONSE PHASE

The Initial Response Phase will begin 48 to 72 hours after landfall and continues for approximately ten days. This phase involves the mobilization of additional resources to the field to conduct emergency operations and to prepare for the Peak Response Phase. The initial approach and positioning of responders will be dictated by the area affected by the hurricane requiring hazardous materials response and infrastructure availability.

Incident Objectives for the Initial Response Phase include:

- Ensure health and safety of responders and the public by conducting operations in accordance with approved site safety plan.
- Conduct recon and assessment of impacted areas to obtain situational awareness and define geographical boundaries
- Minimize environmental impacts from the releases of oil and hazardous material.
- Maintain open coordination/communication with Regional management.
- Coordinate response and assessment activities with Federal, State, Tribal and Local officials
- Establish Incident Command Post(s) and associated logistical Support.
- Stage sufficient resources to accommodate changes in priorities.

The ICS 202 Form – Incident Objectives for the Initial Response phase can be found in Section 9.4.1.

5.3.1 Activities

During the Initial Response Phase, EPA will perform the following activities:

- Mobilizing the initial response team to the field.
- Activating the Incident Management Team (IMT).
- Activating the RSC.

- Assessing environmental conditions (environmental recon, environmental sampling, and facility assessments) to determine environmental response priorities.
- Identify the extent and scope of the incident.
- Address highest priority hazardous materials/oil releases.
- Providing technical assistance through ESF #3 for drinking water system and wastewater treatment facilities.
- Recommending the size of the Peak Response Phase.
- Meeting the logistical needs of the initial response team and preparing for the ramp-up to the Peak Response Phase.

5.3.2 Organization

The Initial Response Phase will require one Incident Command Post (ICP) that incorporates Unified Command including EPA, USCG and the State. The ICS Form 207 – Organizational Chart for the Initial Reponse Phase is included in section 9.4.2 of this Response Plan.

5.3.3 Resources

The Initial Response Phase personnel requirements are summarized in the table below:

Initial Response Phase Summary							
Resources	REOC	JFO	Initial Response Team	Total			
EPA Mgmt	2	2	0	4			
OSC	0	0	11	11			
RSC 3	11	4	7	22			
RSC 2	26	6	15	47			
RSC 1	6	0	0	6			
NCERT/CID	0	2	1	3			
START Contract	10	2	42	54			
ERRS Contract	0	0	19	19			
Logs Contract	0	0	5	5			
IT/ERO Contract	2	0	1	3			
Doc Contract	2	0	0	2			
USGS Contract	1	0	0	1			
GIS Contract	2	0	0	2			
State	0	0	7	7			
USCG	0	0	0	0			
BOA Contract	0	0	0	0			
SSC	0	0	0	0			
TOTAL	62	16	108	186			

More detailed personnel tables for the Initial Response Phase are included in Section 9.4.3. Personnel needs for the entire response are also outlined in the National Resource Template for DHS Scenario 10 in Appendix A.

5.4 PEAK RESPONSE PHASE

The Peak Response Phase will continue from 10 days after mobilization of the Initial Response Phase until the completion of the response effort. This phase will include a significant increase in resources to complete increased FEMA MAs.

Incident Objectives of the Peak Response Phase include:

- Ensure health and safety of responders and the public by conducting operations in accordance with approved site safety plan.
- Conduct recon and assessment of impacted areas to identify targets for recovery and assessment of progress.
- Maintain open coordination/communication with Regional management.
- Coordinate response and assessment activities with Federal, State, Tribal and Local officials
- Provide technical assistance to Drinking Water and Wastewater Treatment Plants.
- Provide assistance with Debris Management through Landfill and Demolition Observations.
- Conduct collections and disposal of HHW, Orphan Containers, High Hazard Materials, and other such materials.
- Conduct environmental sampling, as necessary, to assess the impact of releases of hazardous materials released during the storm.
- Evaluate and determine impact to facilities posing a risk to the public.
- Stage sufficient resources to accommodate changes in priorities.

The ICS 202 Form – Incident Objectives for the Peak Response Phase can be found in Section 9.5.1.

5.4.1 Activities

During the Peak Response Phase EPA will anticipate performing the following activities:

• Mobilization of IMT and RSC personnel.

- Establishment of multiple ICPs.
- Establishment of Area Command.
- Continue assessment of environmental conditions (environmental reconnaissance, environmental sampling, and facility assessments) to determine environmental response priorities to be performed at the request of the State.
- Address prioritized hazardous materials/oil releases.
- Provide technical assistance through ESF #3 for drinking water system and wastewater treatment facilities.
- Maintain logistical support for the Peak Response Phase.
- Collection of orphan containers.
- Collection, bulking, and disposal/recycling Household Hazardous Waste.
- Landfill observation.
- Demolition observation.
- Provide mission related outreach to impacted communities.

5.4.2 Organization

The large geographic area impacted by a category 5 hurricane will necessitate multiple ICPs to address the necessary response activities over multiple counties within hundreds of miles of devastation. This Response Plan includes resources necessary to supply four ICPs, geographically distributed within the area affected by the hurricane. An overall Area Command Post will be established to expedite the transfer of data from the individual ICPs to EPA management and to distribute management objectives to the ICPs.

The implementation of an Area Command (AC) with multiple Incident Commands facilitates the operational planning process and completion of operational objectives through the geographical division of resources. Incident Action Plans for the individual Incident Commands will more accurately reflect the operations conducted within the operational area of each Incident Command. All ICPs and the AC will be unified with the State and the U.S. Coast Guard. For the planning purposes of in this response plan, each ICP is responsible for response activities in three counties/parishes.

The AC responsibilities include:

• Identify critical resources and allocate these critical resources according to the established priorities.

- Ensure that incidents are properly managed.
- Ensure effective communications.
- Ensure that management objectives are met without conflict with agency policy.
- Provide for personnel accountability and a safe operating environment.

The ICS Form 207 – Organization Chart for the Peak Response Phase is included in Section 9.5.2.

5.4.3 Resources

Peak Response Phase personnel requirements for one rotation in the REOC, Area Command and 4 Incident Command Posts are summarized in the table below:

	Peak Response Phase Summary								
Resources	REOC	JFO	Area Command	1/4 - ICPs	Total	Total (2 EPA Rotations and 1.5 EPA Contractor Rotations			
EPA Mgmt	2	2	2	0/0	6	12			
OSC	0	0	0	5/20	20	40			
RSC 3	11	4	11	9/36	62	124			
RSC 2	26	6	15	7/28	75	150			
RSC 1	6	0	4	21/84	94	188			
NCERT/CID	0	2	1	1/4	7	14			
START Contract	10	2	16	111/444	472	708			
ERRS Contract	0	0	2	240/960	962	1443			
Logs Contract	0	0	48	47/188	236	354			
IT/ERO Contract	2	0	1	0/0	3	5			
Doc Contract	2	0	2	0/0	4	6			
USGS Contract	1	0	0	0/0	1	-			
GIS Contract	2	0	0	0/0	2	-			
State	0	0	1	7/28	29	-			
USCG	0	0	1	6/24	25	-			
BOA Contract	0	0	0	45/180	180	-			
SSC	0	0	0	2/8	8	-			
TOTAL	62	16	104	501/2004	2186	3044			

More detailed personnel tables for the Peak Response Phase are included in Section 9.5.3. Personnel needs for the entire response are also outlined in the National Resource Template for

DHS Scenario 10 in Appendix A. In addition, a brief equipment discussion is included in Appendix B

6. RESPONSE COORDINATION

6.1 REGIONAL COORDINATION-REGION 6 & 7; REGIONAL INCIDENT COORDINATION TEAM (RICT)

Regional coordination will occur both internally and externally.

Internally, cross program coordination will be necessary to support EPA's response to the event as well as EPA's programmatic impacts on other agencies' responses. EPA's response activities include characterizing the scope and nature of environmental damage from releases of hazardous materials and performing individual emergency responses to releases of hazardous materials. This internal coordination for EPA's response involves bringing together the appropriate expertice to address issues as they arise and providing the necessary personnel resources to support the reponse. The second area of coordination is the impact of EPA's programmatic/regulatory responsibilities on the activities of other agencies' response activities. Examples of these types of activities include fuel waivers and asbestos requirements. Both of these categories will be coordinated through the RICT. Finally, the focus of EPA resources in the areas described above will require the need to reduce or eliminate routine annual commitments.

Externally, EPA Region 6 will be in close coordination with Region 7 for response support. EPA Region 6 and 7 will also work with EPA Headquarters when national resources (i.e., ASPECT, TAGA, etc.) are needed for the hurricane response.

6.2 FEDERAL PARTNERS

6.2.1 FEMA

During a presidentially declared emergency response, using Stafford Act funding, FEMA will act as the coordinator of the federal response. FEMA will issue Mission Assignments and Task Orders to EPA and other federal agencies, at the request of the State or local entity. FEMA will operate the Regional Response Coordination Center and Joint Field Office where EPA will act as the ESF-10 lead agency (in most cases). FEMA will coordinate the federal Situation Report, with input from EPA

6.2.2 U.S. Coast Guard

ESF #10 consists of EPA and United States Coast Guard (USCG) and activation through a FEMA MA under ESF #10 will be to the extent the State requires assistance. Typically, EPA and the State environmental agency address land and inland water-based response efforts while USCG and the Texas General Land Office (TGLO) (or another comparable agency) conducts water-based activities. The organizational structure for the response action should assign mission

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assignments based on the strengths of individual agencies and maintain the assignment of strategic resources associated within that agency whenever possible.

6.2.3 U.S. Army Corps of Engineers (USACE)

EPA will coordinate with USACE under FEMA ESF #10 or #3, respectively, for demolition or decontamination of structures and collection of HHW. Under the National Response Framework, ESF #3 will be tasked with the collection and separation of HHW. Once HHW is collected, it is delivered to the ESF #10 HHW staging area managed by EPA. However, for planning purposes, EPA is planning for the necessary resources to perform HHW collection and separation responsibilities.

Under ESF #3 of the National Response Framework, the USACE may subtask EPA to address water and wastewater infrastructure concerns. If tasked by USACE, EPA would provide technical assistance, such as sampling and analysis, initial damage assessments, and serve as liaisons to Federal, State, local and municipal representatives. EPA support to ESF #3 is possible through Water and Wastewater Sector of the National Response Framework for natural disasters (e.g., hurricanes, earthquakes).

6.2.4 Occupational Safety and Health Association (OSHA)

OSHA will serve as the coordinator of the Worker Safety and Health Annex. As the coordinator, OSHA ensures the Federal Coordinating Officer and Joint Field Office have consistent, accurate, and timely worker safety and health information for the entire response, and coordinates the delivery of Federal worker safety and health technical assistance and resources to Federal, State, tribal, and local responders. OSHA will convene and chair the JFO's Interagency Safety and Health Committee, which EPA will be a member. This committee coordinates the worker safety and health program among the various agencies. OSHA will work with all federal agencies, including EPA, to determine potential needs for worker safety and health support. Staff from OSHA will participate on emergency response teams as requested by FEMA or EPA.

6.2.5 Center for Disease Control (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR)

EPA works closely with the CDC and ATSDR under ESF#8 because these agencies use the environmental data collected by EPA to make health and safety decisions during a large response.

6.2.6 Natural Resource Trustees

Orphan container recovery will require operations within protected wetlands and marshes. EPA and USCG will coordinate with applicable trustees (i.e. Department of Interior (DOI), National Oceanic and Atmospheric Administration (NOAA), State, etc.) throughout the planning and recovery operations to limit impacts to protected areas.

6.3 STATE, TRIBAL, AND LOCAL REPRESENTATIVES

The incident command structure will incorporate EPA as well as State, tribal, and local representatives to utilize available knowledge and resources for response efforts. State, tribal and local resources are expected to contribute to the response effort in a limited capacity due to the destruction of homes by the hurricane and alternate internal priorities.

7. COMMUNICATIONS

Traditional forms of communications (i.e. telephone, cell phones, internet, etc.,) will be partially or completely disrupted for an estimated 10 days or more. In addition to the initial response, alternate forms of phone and internet communications will be necessary throughout response activities to maintain communications in remote areas.

Internet capabilities (voice and data) can be provided to ICPs and remote locations through the use of the following devices:

- Blackberry cellular phones
- Aircards for laptop computers
- Portable satellite dishes
- Mobile Command Vehicles

Communications via Blackberry and air cards are expected to be severely compromised during the early days of the response. Region 6 has eight portable satellite kits available for deployment. This includes one PSI with BGAN kit which is a handheld device that can support one to three users. Mobile Communication Vehicles provide the most effective source of communications for remote sites. These units either come with integrated satellite dishes or can be deployed with a portable dish. Region 6 currently has one Mobile Command Post, one HAZMAT vehicle, two Logistics Response Vehicles, one Communications Trailer, and one Logistics Supply Trailer that can be deployed with satellite capability.

Communications provided by satellite phones and radios enabled by a repeater will replace telephone and cell phone communications while services are down. Once cell phone service is restored, cell phones will replace radios where service is available and radios will continue to cover communications needs in remote areas. Satellite phones can be used in areas where alternate forms of communication are unavailable.

8. POLICY GUIDANCE AND FIELD CAPABILITY GAPS

8.1 NEED TO INCREASE THE RSC

Regions 6 and 7 currently have approximately 80 and 120 individuals, respectively in the RSC. This scenario indicates a potential need for over 230 RSC individuals during one rotation. Therefore, the number of trained RSCs with the necessary skills to fulfill the volume of RSCs estimated in this response plan for two rotations will need to more than double between Regions 6 and 7.

8.2 PROGRAMMATIC GOALS VS. RESPONSE GOALS

Programmatic efforts will be impacted during a large response and especially if the Agency is dealing with 5 simultaneous events. Resources will need to be committed to EPA's response efforts and addressing programmatic/regulatory implications on the total response to the event (i.e., fuel waivers, asbestos requirements, solid waste assistance, etc.). Because of this significant impact, annual programmatic goals and commitments will need to be eliminated for both Regions 6 and 7.

8.3 "JUST IN TIME" TRAINING FOR RSC

In addition to the need in Regions 6 and 7 to recruit additional RSC members, additional training is also necessary. This training can be in the form of "Just in Time" training. Areas for "Just in Time" training development are:

- Landfill Observation.
- Demolition Observation.
- HHW pad operation.
- HHW collection oversight.
- Orphan container oversight.
- Use of RCMS Cost/Time Unit Leader

8.4 TWO VS. THREE ROTATIONS AND RESOURCE REQUIREMENTS

The national Ad Hoc group developed the initial hurricane response guideline with 3 rotations of responders. Based on personnel within the Regions 6 and 7, two rotations will be sufficient to support the hurricane response activities.

8.5 DEBRIS MANAGEMENT

The scenario indicates the need for Regions 6 and 7 to recruit for "Debris Coordinators" to operate within the IMT structure. The Debris Coordinator would provide FEMA, USACE, and state and local agencies with requested guidance on debris issues.

The regions will need to identify the technical resources that the Debris Coordinator can call upon for technical advice and guidance. The areas of technical expertise would include, but not be limited to:

- RCRA subtitle D (recycling options)
- RCRA Subtitle C
- RCRA enforcement
- Asbestos NESHAP enforcement
- Chlorofluorocarbon enforcement

8.6 DRINKING WATER & WASTE WATER PROGRAM TEAMS

The importance of building EPA Regional drinking water and wastewater emergency response capabilities to ensure safe water cannot be overstated. Critical water infrastructures can be severely damaged during an emergency, and properly functioning drinking water systems and wastewater systems are imperative to protecting public health and the environment.

Though Regions 6 and 7 have individuals with drinking water and wastewater experience, these individuals do not routinely conduct field work as an element of their job function and rarely in response to emergency situations. EPA Regions 6 and 7 do not currently have adequate field ready drinking water and wastewater personnel with the required skills to staff two rotations of a response of this magnitude. Region 6 is in the process of developing a Drinking Water and Wastewater Emergency Response Team that will build capacity for one full rotation of fully qualified personnel for a response of this magnitude. Regions 6 and 7 will need to continue to develop capacity for at least two rotations.

8.7 SAFETY OFFICERS

The safety of EPA personnel and contractors is a priority. The importance of an adequate safety program and qualified Safety Officers increases during a disaster response due to the deployment of a large number of personnel that may not typically respond to incidents. While Regions 6 and 7 have individuals that have taken the ICS Safety Officer course, these individuals do not routinely serve as safety officers. EPA Regions 6 and 7 do not currently have adequate Safety Officers with the required skills to staff a response of this magnitude. A potential source for qualified Safety Officers is through the National Special Teams (i.e., Emergency Response Team and National Decon Team).

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8.8 LONG-TERM EVENT MANAGEMENT

During a large event, resources from every program within Region 6 and 7 will be needed for response activities. As the response progresses, the Agency will transition to non-emergency response personnel and other programmatic resources. This approach will release emergency response personnel to maintain emergency readiness in Regions 6 and 7 as the hurricane response continues.

8.9 TRANSITION OF CONTRACTING MECHANISMS

As the Initial Response Phase of the hurricane response transitions into the Peak Response Phase and throughout the Peak Response Phase, EPA Region 6 and 7 will identify non-emergency response contracts to complete FEMA MAs. Long-term deployment of EPA emergency response contractors can put pressure on contract capacity which may affect future emergency responses and environmental actions.

An alternative would be to evaluate the use of other contract mechanisms (i.e., RACS or GSA) to support these large long lasting response actions.

8.10 PRE-DEVELOPMENT OF SCOPE OF WORK (SOW)

If alternative contracting mechanisms are to be considered, EPA should develop Scopes of Work (SOW) for the additional contractors prior to the response. The contractors will be somewhat prepared for the long-term response activities by the SOW. Ideally, minor revisions to these SOWs would be necessary reflect the actual conditions of the response.

8.11 PLANNING SECTION CHIEF TRAINING

In this response plan, several RSC Group 3 individuals will be needed as Deputy Planning Section Chiefs. However, the majority of the currently trained Planning Section Chiefs are OCSs. Therefore, to expand the Regions 6 and 7 capabilities, additional Planning Section Chief training will be needed in Regions 6 and 7.

8.12 CONTRACTOR RESOURCES

The following table depicts the availability of contractor personnel from the Prime Removal Contracts (START and ERRS) in Region 6 and 7.

	R6 START Prime	R6 START Prime	R6 ERRS Prime	R6 ERRS Prime	R7 START Prime	R7 ERRS Prime
	Weston	Dynamac	EQ	Shaw	Tetra Tech	ER
Region 6	275	49	623	302	125	included in EQ
Region 7	0	0	128	5	100	included in EQ
Dups (R6 Primes)			-79			
Totals	275	49	672	307	225	0

This includes each of the contractors' team subcontractors. It does not include the potential to make local hires, subcontracts to non-team subcontractors, or other prime and team subcontractor

personnel across the nation that are not being used by the other regional groupings in our effort to respond to 5 simultaneous events.

The table shows that we have 549 START Contractors and 979 ERRS Contractors available within Region 6 and 7 that are estimated to be available. Our plan shows that we need 472 START and 962 ERRS Contractors per rotation to respond based upon this plan.

It would appear that this may certainly present a challenge for Region 6 and 7 to respond to the level indicated in this plan without additional contractors through local hires, subcontracting and/or accessing contractor personnel outside of the boundaries of the regional grouping.

8.13 DEPTH OF FINANCE AND LOGISTICS PERSONNEL

Region 6 and Region 7 do not have sufficient personnel that have finance and logistics experience, received appropriate ICS position specific training, and who a field deployable to staff all of the finance and logistic positions for this scale of an event. To account for this, finance and logistic "points of contact" will be placed within each Incident Command Post with the bulk of EPA finance and logistics resources being placed at Area Command and the REOC. Regions 6 and 7 will need to take actions to develop additional field deployable logistics and finance capabilities.

8.14 LOGISTICS DEPLOYMENT DECISION

Region 6 places a heavy reliance on contracts for logistics support. The Initial Response Team will mobilize within 48 to 72 hours after hurricane landfall. This team will mobilize to conditions without running water, electricity, cell phone coverage, or sewer service. The current logistics contract being considered provides the contractor 24 hours from notification to provide basic logistics needs to respond. In order to ensure that the logistical demands of this Initial Response Team are met, the decision to activate the Logistics contract may need to be made prior to extensive tasking by FEMA.

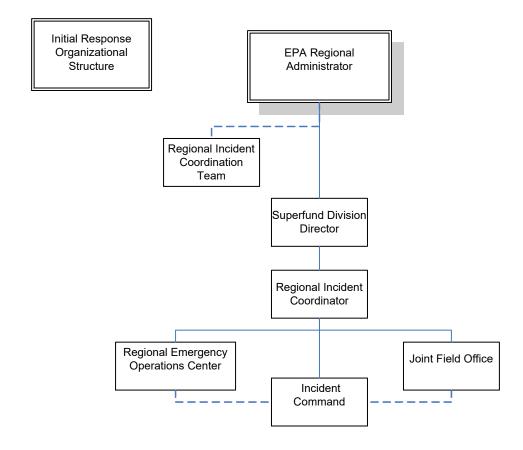
9. U.S. EPA REGION 6 EMERGENCY RESPONSE PLAN – NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) COMPLIANT INCIDENT COMMAND SYSTEM) FORMS

91	PRE.	DEPI	OYMENT	PHASE

9.1.1 ICS 202 Form – Incident Objectives (Pre-Deployment Phase)

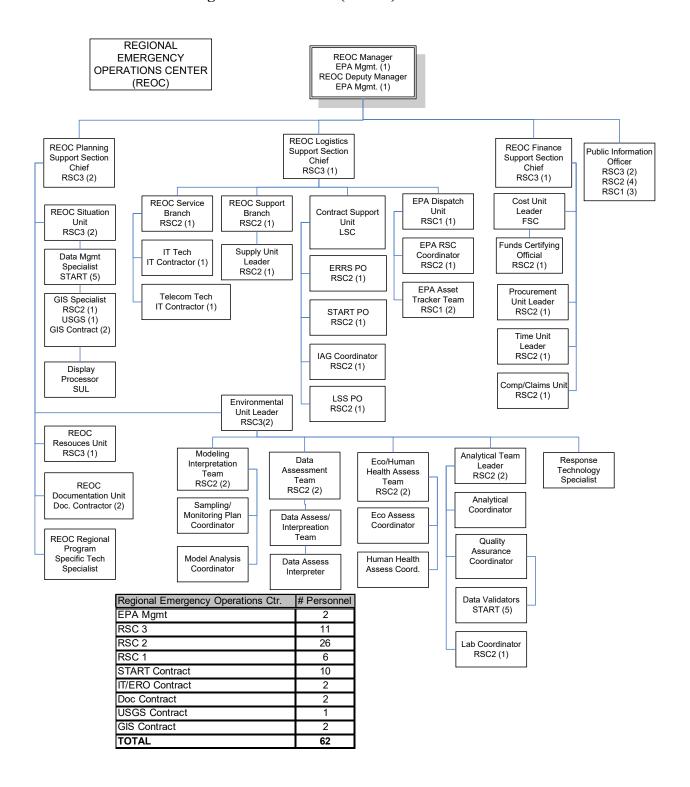
1. Incident Name DHS Scenario 10: Hurricane in a Major Port City, Houston, Texas	2. Operational Period (Date/Time) From: 5 Days Before Landfall To: Mobilization of IRT	INCIDENT OBJECTIVES ICS 202-CG				
3. Objective(s)						
1) Ensure health and sa conducting operations in a plan.	afety of responders and th accordance with approved					
Coordinate with Fed representatives.	leral, State, Tribal, and loc	al				
, , , , , , , , , , , , , , , , , , , ,	environmental Rapid Needs Assessments (RNA) with FEMA and					
4) Staff FEMA Emergency and Rapid Needs Assessn	-	,				
5) Maintain open coordi management.	nation/communication wit	h Regional				
Approved Site Safety Plan Located a	at: TBD					
Approved one outery Figure Located (
5. Prepared by: (Planning Section C	hief) Da	te/Time				

9.2 ICS 207 FORM – ORGANIZATIONAL CHART (INITIAL RESPONSE ORGANIZATIONAL STRUCTURE)



9.3 REGIONAL EMERGENCY OPERATIONS CENTER (REOC)

9.3.1 ICS 207 Form – Organizational Chart (REOC)



9.3.2 Personnel Summary Table – Regional Emergency Operations Center (REOC)

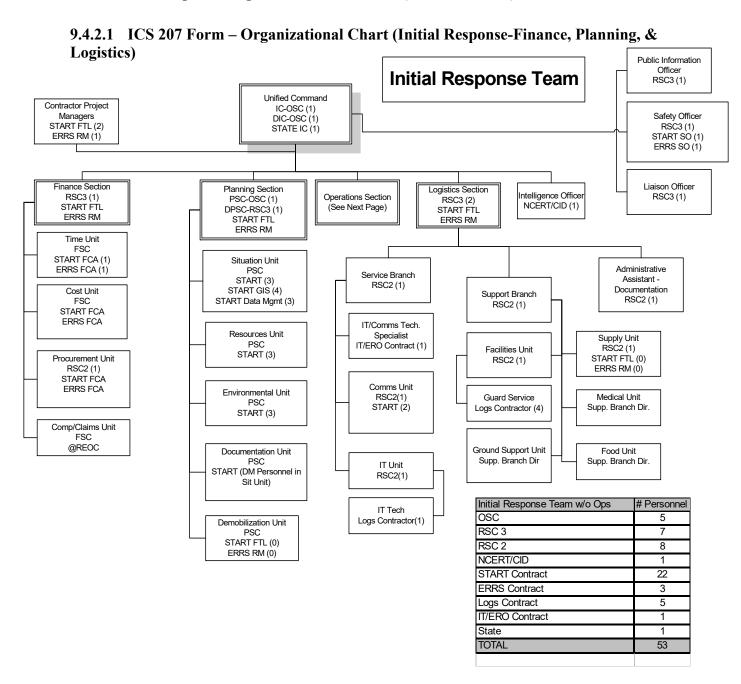
REOC Personnel Summary							
Resources	Command & General Staff	Operations	Planning	Finance	Logistics	Total	
EPA Mgmt	2	0	0	0	0	2	
OSC	0	0	0	0	0	0	
RSC 3	6	0	5	0	0	11	
RSC 2	4	0	10	4	8	26	
RSC 1	3	0	0	0	3	6	
NCERT/CID	0	0	0	0	0	0	
START	0	0	10	0	0	10	
Contract							
ERRS	0	0	0	0	0	0	
Contract							
Logs Contract	0	0	0	0	0	0	
IT/ERO	0	0	0	0	2	2	
Contract							
Doc Contract	0	0	2	0	0	2	
USGS	0	0	1	0	0	1	
Contract							
GIS Contract	0	0	2	0	0	2	
State	0	0	0	0	0	0	
USCG	0	0	0	0	0	0	
BOA Contract	0	0	0	0	0	0	
SSC	0	0	0	0	0	0	
TOTAL	15	0	30	4	13	62	

9.4 INITIAL RESPONSE TEAM

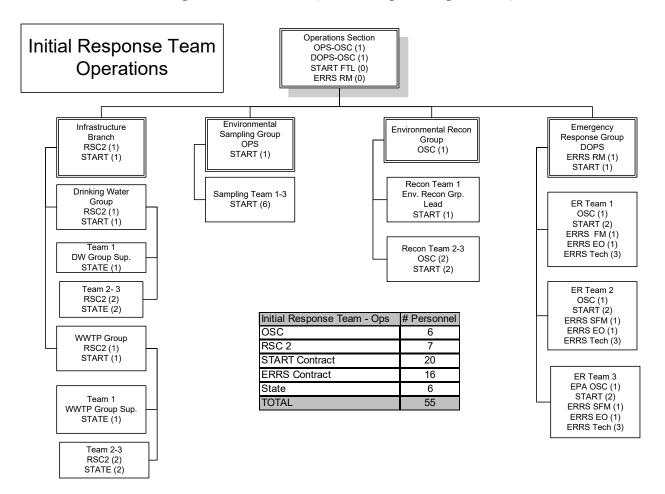
9.4.1 ICS 202 Form – Incident Objectives (Initial Response Phase)

1. Incident Name DHS Scenario 10: Hurricane in a Major Port City, Houston, Texas	2. Operational Period (Date/Time) From: Mobilization To: Mobe + 10 days	INCIDENT OBJECTIVES ICS 202-CG					
3. Objective(s)							
Ensure health and safety of responders and the public by conducting operations in accordance with approved site safety plan.							
Conduct recon and assessment of impacted areas to obtain situational awareness and define geographical boundaries							
 Minimize environme material. 	ental impacts from the releases o	f oil and hazardous					
4) Maintain open coord	lination/communication with Reલ્	jional management.					
5) Coordinate with Fed	leral, State, Tribal, and local repr	esentatives.					
6) Establish Incident C	ommand Post(s) and associated	logistical Support.					
7) Stage sufficient reso	ources to accommodate changes	in priorities.					
4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions)							
Approved Site Safety Plan Located at: TBD							
5. Prepared by: (Planning Section	ion Chief)	Date/Time					

9.4.2 Initial Response Organizational Structure (ICS 207 Forms)



9.4.2.2 ICS 207 Form – Organizational Chart (Initial Response-Operations)



9.4.3 PERSONNEL SUMMARY TABLES

9.4.3.1 Personnel Summary Table – Initial Response Phase Summary

Initial Response Phase Summary							
Resources	REOC	JFO	IRT	Total			
EPA Mgmt	2	2	0	4			
OSC	0	0	11	11			
RSC 3	11	4	7	22			
RSC 2	26	6	15	47			
RSC 1	6	0	0	6			
NCERT/CID	0	2	1	3			
START	10	2	42	54			
Contract							
ERRS	0	0	19	19			
Contract							
Logs Contract	0	0	5	5			
IT/ERO	2	0	1	3			
Contract							
Doc Contract	2	0	0	2			
USGS	1	0	0	1			
Contract							
GIS Contract	2	0	0	2			
State	0	0	7	7			
USCG	0	0	0	0			
BOA Contract	0	0	0	0			
SSC	0	0	0	0			
TOTAL	62	16	108	186			

9.4.3.2 Personnel Summary Table – Initial Response Phase (FEMA Joint Field Office)

Initial Response Phase – FEMA JFO and Coordination									
	Command and General Staff								
Resources	ESF 10 Desk	ESF 3 Desk/USACE- RFO	JIC ESF 15	SFO	JOC	Total			
EPA Mgmt	0	0	0	2	0	2			
OSC	0	0	0	0	0	0			
RSC 3	0	0	4	0	0	4			
RSC 2	2	4	0	0	0	6			
RSC 1	0	0	0	0	0	0			
NCERT/CID		0	0	0	2	2			
START Contract	2	0	0	0	0	2			
ERRS Contract	0	0	0	0	0	0			
Logs Contract	0	0	0	0	0	0			
IT/ERO Contract	0	0	0	0	0	0			
Doc Contract	0	0	0	0	0	0			
USGS Contract	0	0	0	0	0	0			
GIS Contract	0	0	0	0	0	0			
State	0	0	0	0	0	0			
USCG	0	0	0	0	0	0			
BOA Contract	0	0	0	0	0	0			
SSC	0	0	0	0	0	0			
TOTAL	4	4	4	2	2	16			

9.4.3.3 Personnel Summary Table – Initial Response Team

Initial Response Team						
Resources	Command & General Staff	Operations	Planning	Finance	Logistics	Total
EPA Mgmt	0	0	0	0	0	0
OSC	5	6	0	0	0	11
RSC 3	7	0	0	0	0	7
RSC 2	0	7	0	1	7	15
RSC 1	0	0	0	0	0	0
NCERT/CID	1	0	0	0	0	1
START Contract	3	20	16	1	2	42
ERRS Contract	2	16	0	1	0	19
Logs Contract	0	0	0	0	5	5
IT/ERO Contract	0	0	0	0	1	1
Doc Contract	0	0	0	0	0	0
USGS Contract	0	0	0	0	0	0
GIS Contract	0	0	0	0	0	0
State	1	6	0	0	0	7
USCG	0	0	0	0	0	0
BOA Contract	0	0	0	0	0	0
SSC	0	0	0	0	0	0
TOTAL	19	55	16	3	15	108

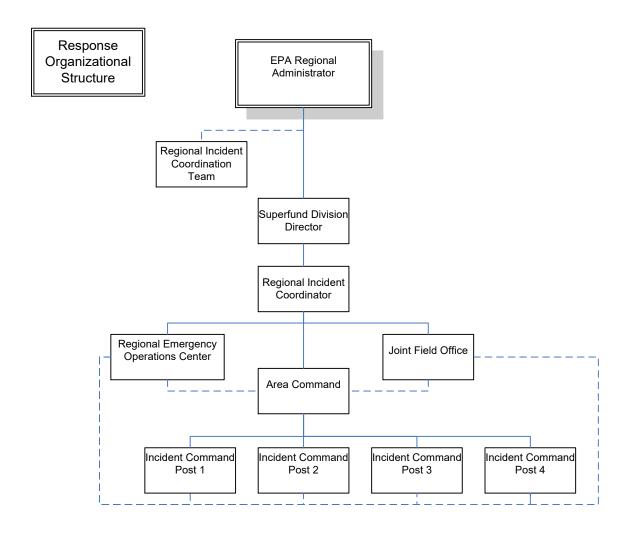
9.5 PEAK RESPONSE TEAM

9.5.1 ICS Form 202 – Incident Objectives (Peak Response Phase)

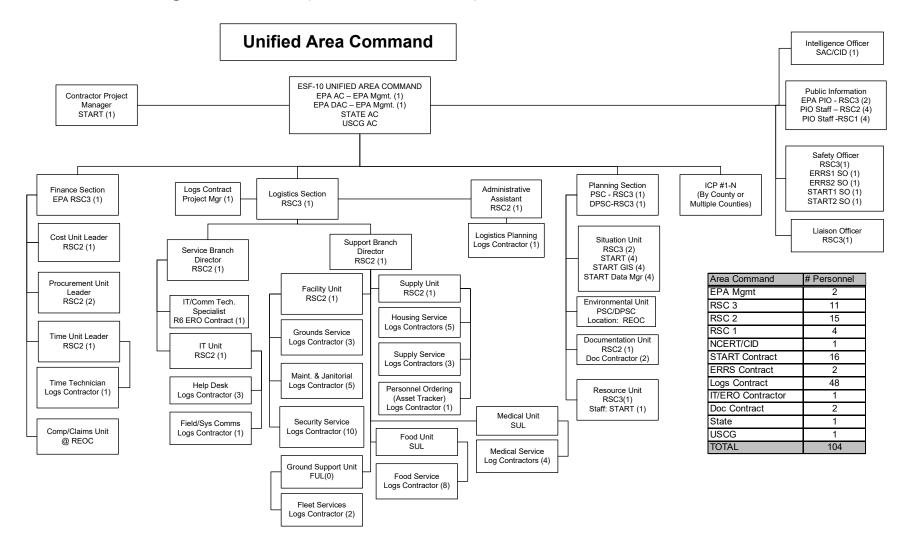
1. Incident Name DHS Scenario 10: Hurricane in a Major Port City, Houston, Texas	2. Operational Period (Date/Time) From: Mob + 10 days To: Demobilization	INCIDENT OBJECTIVES ICS 202-CG					
 Objective(s) Ensure health and safety of responders and the public by conducting operations in accordance with approved site safety plan. 							
	2) Conduct recon and assessment of impacted areas to identify targets for recovery and assessment of progress.						
3) Maintain open coordinatio	n/communication with Regional	management.					
4) Coordinate with Federal, S	State, Tribal, and local representa	tives.					
5) Provide technical assistan Plants.	,						
6) Provide assistance with Debris Management through Landfill and Demolition Observations.							
7) Conduct collections and disposal of HHW, Orphan Containers, High Hazard Materials, and other such materials.							
8) Conduct environmental sampling, as necessary, to assess the impact of releases of hazardous materials released during the storm.							
9) Evaluate and determine impact to facilities posing a risk to the public.							
10) Stage sufficient resources to accommodate changes in priorities.							
4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions)							
Approved Site Safety Plan Located at: TBD							
5. Prepared by: (Planning Section Ch	nief)	Date/Time					

9.5.2 Peak Response Organizational Structure (ICS 207 Forms)

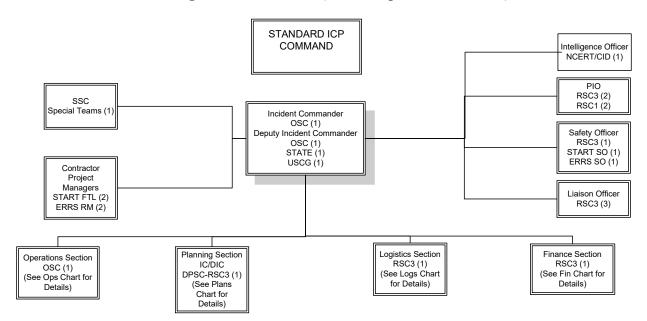
9.5.2.1 ICS 207 Form – Organizational Chart (Peak Response Organizational Structure)



9.5.2.2 ICS 207 Form - Organizational Chart (Unified Area Command)

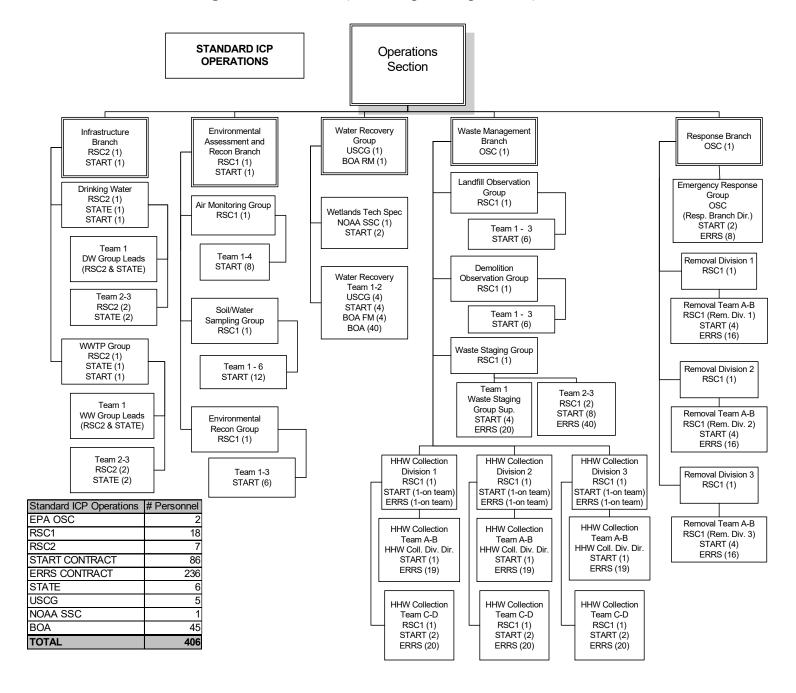


9.5.2.3 ICS 207 Form – Organizational Chart (Peak Response-Command)

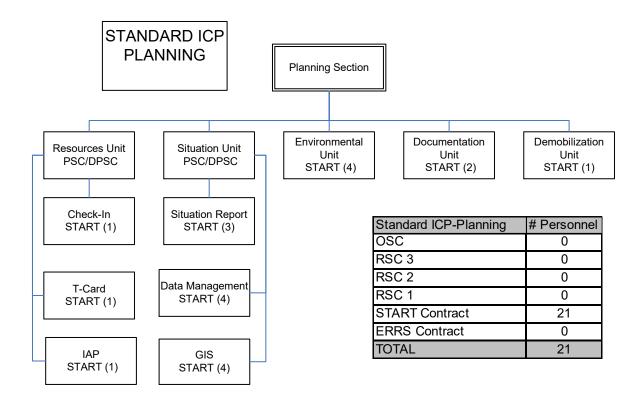


Standard ICP-Command	# Personnel
OSC	3
RSC 3	9
RSC 1	2
NCERT/CID	1
START Contract	3
ERRS Contract	3
State	1
USCG	1
SSC	1
TOTAL	24

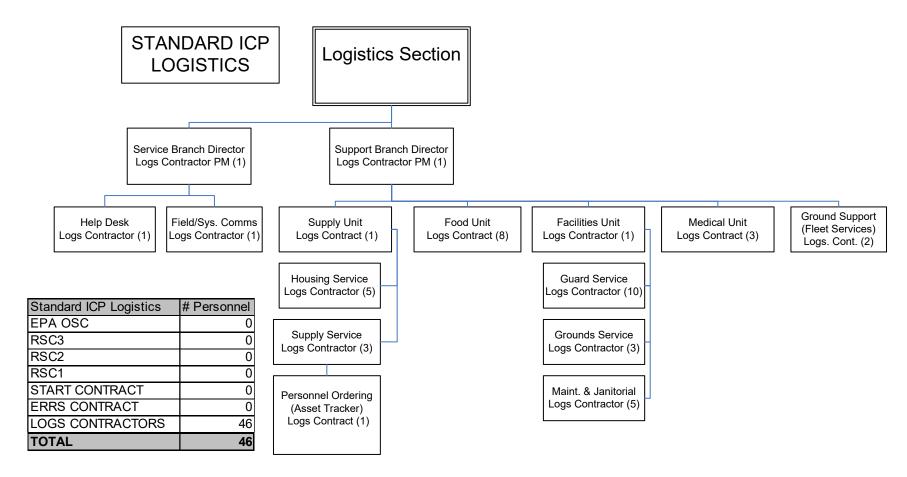
9.5.2.4 ICS 207 Form – Organizational Chart (Peak Response-Operations)



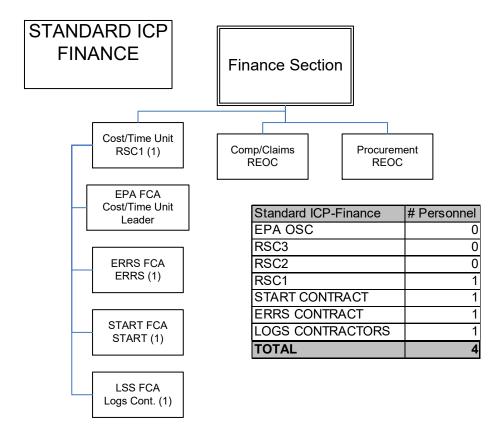
9.5.2.5 ICS 207 Form – Organizational Chart (Peak Response-Planning)



9.5.2.6 ICS 207 Form – Organizational Chart (Peak Response-Logistics)



9.5.2.7 ICS 207 Form – Organizational Chart (Peak Response-Finance)



9.6 PERSONNEL SUMMARY TABLES – PEAK RESPONSE PHASE

9.6.1 Personnel Summary Table – Peak Response Phase (REOC, JFO, Area Command, and $\frac{1}{4}$ ICPs)

Peak Response Phase Summary						
Resources	REOC	JFO	Area Command	1/4 - ICPs	Total	Total (2 EPA Rotations and 1.5 EPA Contractor Rotations
EPA Mgmt	2	2	2	0/0	6	12
OSC	0	0	0	5/20	20	40
RSC 3	11	4	11	9/36	62	124
RSC 2	26	6	15	7/28	75	150
RSC 1	6	0	4	21/84	94	188
NCERT/CID	0	2	1	1/4	7	14
START Contract	10	2	16	111/444	472	708
ERRS Contract	0	0	2	240/960	962	1443
Logs Contract	0	0	48	47/188	236	354
IT/ERO Contract	2	0	1	0/0	3	5
Doc Contract	2	0	2	0/0	4	6
USGS Contract	1	0	0	0/0	1	-
GIS Contract	2	0	0	0/0	2	-
State	0	0	1	7/28	29	-
USCG	0	0	1	6/24	25	-
BOA Contract	0	0	0	45/180	180	-
SSC	0	0	0	2/8	8	-
TOTAL	62	16	104	501/2004	2186	3044

9.6.2 Personnel Summary Table – Peak Response Phase (FEMA Joint Field Office)

Joint Field Office and Coordination							
Command and General Staff							
Resources	ESF 10 Desk	ESF 3 Desk/USACE- RFO	JIC ESF 15	SFO	JOC	Total	
EPA Mgmt	0	0	0	2	0	2	
OSC	0	0	0	0	0	0	
RSC 3	0	0	4	0	0	4	
RSC 2	2	4	0	0	0	6	
RSC 1	0	0	0	0	0	0	
NCERT/CID		0	0	0	2	2	
START Contract	2	0	0	0	0	2	
ERRS Contract	0	0	0	0	0	0	
Logs Contract	0	0	0	0	0	0	
IT/ERO Contract	0	0	0	0	0	0	
Doc Contract	0	0	0	0	0	0	
USGS Contract	0	0	0	0	0	0	
GIS Contract	0	0	0	0	0	0	
State	0	0	0	0	0	0	
USCG	0	0	0	0	0	0	
BOA Contract	0	0	0	0	0	0	
SSC	0	0	0	0	0	0	
TOTAL	4	4	4	2	2	16	

9.6.3 Personnel Summary Table – Peak Response Phase (Individual Incident Command Post)

Standard Incident Command Post						
Resources	Command & General Staff	Operations	Planning	Finance	Logistics	Total
EPA Mgmt	0	0	0	0	0	0
OSC	3	2	0	0	0	5
RSC 3	9	0	0	0	0	9
RSC 2	0	7	0	0	0	7
RSC 1	2	18	0	1	0	21
NCERT/CID	1	0	0	0	0	1
START	3	86	21	1	0	111
Contract						
ERRS	3	236	0	1	0	240
Contract						
Logs Contract	0	0	0	1	46	47
IT/ERO	0	0	0	0	0	0
Contract						
Doc Contract	0	0	0	0	0	0
USGS	0	0	0	0	0	0
Contract						
GIS Contract	0	0	0	0	0	0
State	1	6	0	0	0	7
USCG	1	5	0	0	0	6
BOA	0	45	0	0	0	45
Contract						
SSC	1	1	0	0	0	2
TOTAL	24	406	21	4	46	501

FIGURE 1

Hurricane Planning Map

APPENDIX A

National Resource Template

For

DHS Scenario 10

APPENDIX B

Equipment Discussion

For

DHS Scenario 10